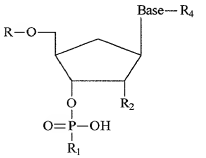
THAT WHICH IS CLAIMED IS:

1. An antibody that specifically binds to a synthetic oligonucleotide having a organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto.

2. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is H or a protecting group;

subject to the proviso that R is a covalent bond to an adjacent nucleotide when said protected base is not a 5' terminal nucleotide in said oligonucleotide;

R_1 is H or a protecting group;

subject to the proviso that R_1 is a covalent bond to an adjacent nucleotide when said protected base is not a 3' terminal nucleotide in said oligonucleotide;

R_2 is H or $-OR_3$;

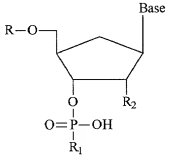
R_3 is H or a protecting group;

Base is a purine or pyrimidine base;

R_4 is a protecting group bonded to an amino group of said base;

and further subject to the proviso that when one of R, R_1, R_3 and R_4 is a protecting group, then the others of R, R_1, R_3 and R_4 are not protecting groups.

3. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides and has a 5' nucleotide, and wherein said 5' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

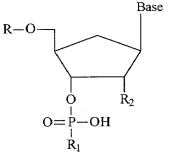
R is a protecting group;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is -H or –OH; and

Base is a purine or pyrimidine base.

4. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides and has a 3' nucleotide, and wherein said 3' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

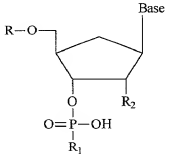
R is a covalent bond to an adjacent nucleotide;

R_1 is a protecting group;

R_2 is H or –OH; and

Base is a purine or pyrimidine base.

5. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

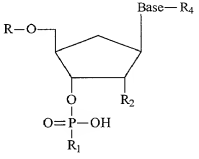
R_1 is a covalent bond to an adjacent nucleotide;

R_2 is $-OR_3$;

R_3 a protecting group; and

Base is a purine or pyrimidine base.

6. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is H or –OH;

Base is a purine or pyrimidine base; and

R_4 is a protecting group bonded to an amino group of said base.

7. An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected with a photolabile protecting group.

8. An antibody according to claim 1, which antibody is a polyclonal antibody.

9. An antibody according to claim 1, which antibody is a monoclonal antibody.

10. An antibody according to claim 1 immobilized on a solid support.

11. A cell that expresses an antibody according to claim 9.

12. A cell according to claim 11, which cell is a hybridoma.

13. A cell according to claim 11, which cell contains and expresses a heterologous nucleic acid encoding said antibody.

14. A method for detecting incomplete deprotection of a synthetic oligonucleotide by immunoassay, said immunoassay comprising the steps of:

contacting a synthetic oligonucleotide to an antibody according to claim 1; and then

detecting the presence or absence of binding of said antibody to said oligonucleotide, the presence of binding indicating incomplete deprotection of said synthetic oligonucleotide.

15. A method according to claim 14, wherein said immunoassay is a heterogeneous immunoassay.

16. A method according to claim 14, wherein said immunoassay is a homogeneous immunoassay.

17. A method according to claim 14, wherein said immunoassay is a sandwich assay.

18. A method according to claim 14, wherein said oligonucleotide is immobilized on a solid support.

19. A method for separating protected from fully deprotected synthetic oligonucleotides, comprising:

contacting a mixture of protected from fully deprotected synthetic oligonucleotides to antibodies according to claim 1, wherein said protected synthetic oligonucleotides have said organic protecting group covalently bound thereto, so that said protected synthetic oligonucleotides bind to said antibody; and then

separating said antibodies from said fully deprotected synthetic oligonucleotides.

20. A method according to claim 19, wherein said antibody is immobilized on a solid support.

21. A method according to claim 19, wherein said protected synthetic oligonucleotide is a partially protected synthetic oligonucleotide.

22. A method according to claim 19, wherein said contacting and separating steps are carried out by affinity chromatography.

23. An article useful for the determining incomplete deprotection of a synthetic oligonucleotide in an immunoassay, said article comprising:

a solid support having a surface portion, said surface portion having at least two separate discrete regions formed thereon;

a first oligonucleotide bound to one of said separate discrete regions, said first oligonucleotide having a protecting group bound thereto; and

a second oligonucleotide bound to another of said separate discrete regions, said second oligonucleotide not having said protecting group bound thereto;

wherein the nucleotide sequence of said first and second oligonucleotides are the same.

24. An article according to claim 23, further comprising:

a third oligonucleotide bound to another of said separate discrete regions; said third oligonucleotide also having said protecting group bound to said first oligonucleotide bound thereto;

wherein said third oligonucleotide is partially deprotected;

and wherein the nucleotide sequence of said first, second, and third oligonucleotides are the same.

25. An article according to claim 23, wherein said substrate comprises a nitrocellulose strip.

26. A method of making an antibody that specifically binds to a synthetic oligonucleotide having a organic protecting group covalently bound thereto, which antibody does not bind to the said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto, said method comprising the steps of:

synthesizing said synthetic oligonucleotide on a solid particulate support with said organic protecting group covalently bound to said synthetic oligonucleotide, or synthesizing a nucleotide on said solid support with said organic protecting group bound to said nucleotide; and then, without removing said oligonucleotide or nucleotide from said solid support;

immunizing an animal with said synthetic oligonucleotide or nucleotide bound to said solid support in an amount sufficient to produce said antibody.

27. A method according to claim 26, wherein said synthesizing step is followed by the step of fragmenting said beads prior to said immunizing step.

28. A method according to claim 26, further comprising the step of:

collecting said antibody from said animal.

29. A method according to claim 26, further comprising the steps of:

collecting spleen cells from said animal; then

producing a plurality of hybridoma cell lines from said spleen cells; and then

isolating a particular hybridoma cell line that produces said antibody from said plurality of hybridoma cell lines.

30. A method according to claim 26, wherein said synthetic oligonucleotide is covalently bound to said solid support.

31. A method according to claim 26, wherein said synthetic oligonucleotide is covalently bound to said solid support with a succinyl linker.

32. A method according to claim 26, wherein said solid support comprises a controlled pore glass bead.

33. A method of screening an oligonucleotide array for insufficient deprotection or insufficient elongation of oligonucleotides therein, said method comprising the steps of:

(a) providing an oligonucleotide array comprising a substrate having a plurality of different oligonucleotides immobilized thereon, with said different oligonucleotides immobilized in different separate and discrete locations on said substrate;

(b) providing an antibody that specifically binds to a synthetic oligonucleotide having an organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto; and then

(c) contacting said antibody to said oligonucleotide array to thereby detect the presence or absence of binding of said antibody selected and discrete locations on

said array, the presence of binding to separate and discrete locations in said array indicating insufficient deprotection or insufficient elongation of oligonucleotides therein.

34. A method according to claim 33, wherein said substrate comprises silicon.

35. A method according to claim 33, wherein said step of providing an array is carried out by synthesizing said oligonucleotides *in situ* on said substrate.

36. A method according to claim 33, further comprising repeating steps *(b)* to *(c)* at least once with a different antibody on each repetition so that a plurality of different protecting groups on oligonucleotides in the array may be detected.

37. A method according to claim 33, further comprising the step of:

generating an indicia recording the presence of insufficient deprotection or insufficient elongation of oligonucleotides in at least one separate and discrete location on said array.

38. A method according to claim 37, wherein said indicia is a qualitative indicia.

39. A method according to claim 37, wherein said indicia is a quantitative indicia.

40. A correctable oligonucleotide array, comprising, in combination:

(a) a substrate having a plurality of different oligonucleotides immobilized thereon, with said different oligonucleotides immobilized in different separate and discrete locations on said substrate; and

(b) a plurality of indicia associated with said array, said indicia recording the presence of insufficient deprotection or insufficient elongation of at least one oligonucleotide, each of said at least one oligonucleotide located in a different separate and discrete location on said array.

41. An array according to claim 40, wherein said substrate has at least 1000 different oligonucleotides immobilized in different separate and discrete locations on said substrate.

42. An array according to claim 40, wherein said indicia are stored in or printed on said array.

43. An array according to claim 40, wherein said indicia are contained in a computer file, said array further comprising an identifier associating said substrate and said indicia.

44. An array according to claim 40, wherein said indicia are contained on a web site, said array further comprising an identifier associating said substrate and said indicia.

45. A method of using an oligonucleotide array and compensating for insufficient deprotection or insufficient elongation of oligonucleotides on said array, comprising the steps of:

(a) providing a substrate having a plurality of different oligonucleotides immobilized thereon, with said different oligonucleotides immobilized in different separate and discrete locations on said substrate;

(b) providing indicia associated with said array, said indicia recording the presence of insufficient deprotection or insufficient elongation of at least one oligonucleotide, said at least one oligonucleotide located in a separate and discrete locations on said array;

(c) providing a test compound;

(d) detecting the binding of said test compound to at least one of said plurality of different oligonucleotides; and then

(d) determining the degree of binding of said test compound to said oligonucleotide from *(i)* said detected binding and *(ii)* said indicia recording the presence of insufficient deprotection or insufficient elongation, so that said

insufficient deprotection or insufficient elongation is compensated for during said determining step.

46. A method according to claim 45, wherein said test compound is a protein, peptide, or oligonucleotide.

47. A method according to claim 45, wherein said test compound is mRNA.

48. A method according to claim 45, wherein said determining step is carried out by generating a color indication of degree of binding.

49. A method according to claim 45, wherein said determining step is carried out by generating a numeric indication of degree of binding.

50. A method according to claim 45, wherein said degree of binding is binding affinity, binding amount, or both binding affinity and binding amount.

51. A method of using an oligonucleotide array while compensating for insufficient deprotection or insufficient elongation of oligonucleotides on said array, said method comprising the steps of:

(a) providing a substrate having a plurality of different oligonucleotides immobilized thereon, with said different oligonucleotides immobilized in different separate and discrete locations on said substrate;

(b) providing indicia associated with said array, said indicia recording the presence of insufficient deprotection or insufficient elongation of at least one oligonucleotide, said at least one oligonucleotide located in a separate and discrete locations on said array;

(c) providing a test compound;

(d) contacting said test compound to said array;

(d) deleting from analysis said at least one oligonucleotide in a separate and discrete location having insufficient deprotection, with binding of said test compound

to said array being detected with the remaining oligonucleotides in separate and discrete locations that have not been deleted from analysis; and then

(d) detecting the binding of said test compound to said remaining oligonucleotides in separate and discrete locations in said array.

52. A method according to claim 51, wherein said test compound is a protein, peptide, or oligonucleotide.

53. A method according to claim 51, wherein said test compound is mRNA.

54. A method according to claim 51, wherein said detecting step is carried out by generating a color indication of binding.

55. A method according to claim 51, wherein said detecting step is carried out by generating a numeric indication of binding.